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State of Utah
OFFICE OF PLANNING AND BUDGET
Resource Development Coordinating Committee

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Salt Lake City, Utah 84114
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August 28, 1992

11/053/005
RECEIVED

AUG 31 1992

DIVISION OF
OIL GAS & MINING

D. Wayne Hedberg
Division of Oil, Gas, and Mining
355 West North Temple, Suite 350
Salt Lake City, UT 84180-1203

SUBJECT: Approval of Permit Revision - Tenneco Minerals Goldstrike Mine.
State Identifier Number: UT920713-010

Dear Mr. Hedberg:

The Resource Development Coordinating Committee, representing the State of Utah, has reviewed this proposal. Subsequent to our letter dated August 24, we received the following comments from the Division of Wildlife Resources.

The Division of Wildlife Resources has been working with Mr. Kluksdahl, the Goldstrike Mine manager, in voicing our concerns. Both aquatic and terrestrial wildlife could be affected by mine operations. We have identified several actions the mine can take to minimize these impacts.

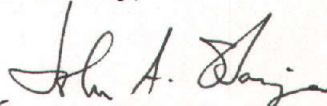
The mine is located in the East Fork of Beaver Dam Wash watershed. There could be downstream effects on the Virgin River spinedace (a category 2 species), and a Class 3 rainbow trout stream. We would request that water quality protection be ensured to this stream and watershed.

The area is high priority mule deer winter range from November 1 through May 15. We request the company use the attached revegetation techniques and plantings in their reclamation plan.

To reduce the risk of wildlife coming into contact with their cyanide solution ponds, we request the use of either white or orange colored netting or netting with attached streamers over all solution ponds, and use of solution ditch covers with aggressive-lined banks to reduce the possibility of animals drinking from these ponds.

The Committee appreciates the opportunity to review this proposal. Please direct any other written questions regarding this correspondence to the Utah State Clearinghouse at the above address or call Carolyn Wright at (801) 538-1535 or John Harja at (801) 538-1559.

Sincerely,


for Brad T. Barber
State Planning Coordinator

BTB/rpj
Attachment

Recommended guidelines for seedbed preparation and planting techniques within the SUBMONTANE ecological association.

- A. Seedbed Preparation: (1) Disturbed areas should be double ripped. (2) Fertilizer (0-16-8) at a rate of 50 lb/acre should be disked into the topsoil mass prior to seeding. (3) Where possible, the grass segment of the seed mix should be drilled. The remainder of the seed mix should be hydrosprayed in a slurry containing tackifier (60 lb/acre) and wood fiber mulch (400 lb/acre). This first application containing the seed should be immediately followed by another hydrosprayed slurry to incorporate more tackifier (60 lb/acre), more wood fiber mulch (2,000 lb/acre), and nitrogen fertilizer (33-0-0 distributed at a rate of 50 lb/acre). (3a) If a hydrospray technique is not utilized, the entire seed mix should be drilled. (3b) If broadcast, the seed mix should be doubled, spread and covered through use of a harrow or chain. (4) After seed application (3a or 3b), nitrogen fertilizer (33-0-0 distributed at a rate of 50 lb/acre) should be broadcast and an acceptable mulch should be applied at a rate of 2,000 lb/acre to protect the raw soil from erosion and to conserve moisture. Mulch should be held in place by tackifying, crimping, or netting. (5) Seeding should occur following a permanent killing frost which is usually after October 1.
- B. Nursery Stock or Transplants: Planting of nursery or transplant stock should occur in the spring when soil moisture is greatest. Nursery stock should be planted after dormancy breaks; greatest success for transplant stock is achieved during dormancy. Shoots spaced 2, 3, 4, 6, 10, 12, 13, and 15 feet apart will achieve 10888, 4840, 2722, 1210, 436, 302, 258, and 193 plants per acre, respectively. A goal of 60% canopy cover should be reached. All plantings need to have the soil compacted around the roots.
- C. Cuttings of Woody Riparian Species (willow, cottonwood, etc.): Cut stems at a length of 12 to 18 inches from 1-3 year old local, wild stock (0.5 to 1.0 inch diameter) with a 30-45° angle at the basal end. Lateral branches and leaves must be removed. Cuttings can be immediately transplanted or cold stored until the ground thaws. The basal end can be dipped in indolebutyric acid prior to planting to aid in root formation. When planting, all but one inch of the stem should be extended into the moist soil to a depth of the water table. This will protect recreators from inadvertent injury. Dormant logs (1.5 to 6 inches diameter and up to 20 feet long) can also be used for many species as long as the water table is reached.
- D. Bare-root or Containerized Plants: Prior to planting, bare-root or containerized plants should be stored at 34-39° F for one week to "harden." Planting should be in an adequately sized hole to insure that roots are well distributed and extending full length into the hole. For both bare-root and containerized stock, care needs to be taken that the root hairs are not allowed to dry. The entire edge of the root mass for containerized stock should be scarified to alleviate root binding.
- E. Plugs: Plugs of vegetation can be excavated with a shovel or front-end loader. They should be handled such that moist soil remains packed firmly around the roots. A similar sized hole needs to be excavated and the plug planted.
- F. Rhizomic Plants: Woody plants with interconnected root stock should be located and excavated intact. The tops of the plants should be removed so that only one remains. Connecting roots should be aligned vertically and buried. In the instance of herbaceous plants, the rhizomes can be harvested with a front-end loader, and distributed with a manure spreader. A one inch layer of top soil should be compacted over plantings.



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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September 10, 1992

Mr. Larry Gore
Area Geologist
Bureau of Land Management
Dixie Resource Area
225 North Bluff Street
P. O. Box 726
St. George, Utah 84770

Dear Mr. Gore:

Re: Seed Mix Information, Tenneco Minerals Goldstrike Mine, M/053/005,
Washington County, Utah

Please find attached, seed mix recommendations supplied by Utah Division of Wildlife Resource apropos the Goldstrike mine. We have already agreed upon a seed mix for this site, but the information may be useful for future reference.

Sincerely,

Holland Shepherd
Senior Reclamation Specialist

jb
Attachment
M053005